MA61C

Multipurpose
Adapter
Generic
Interface
Connector

EGSE

MA61C EGSE is an intelligent, plug-and-play Command and Data Handling (C&DH) system engineered to seamlessly integrate multiple satellite subsystems with onboard computers.

MA61C EGSE interfaces with essential subsystems such as AOCS sensors and actuators, communication, power, payload, and more.

MA61C ESGE also enables seamless testing of payload connectivity via a USB link to the MA61C system, making it particularly useful for testing software applications hosted on a computer. This setup allows users to send commands directly to the actual hardware payload for efficient and precise testing.
The system is designed for ease of use, offering a database of pre-installed drivers that enable **plug-and-play functionalities. This simplifies hardware integration with:**

- **device recognition**
- **self configuration**
- **automatic driver installation**

The tool has a user-friendly Graphic User Interface (GUI), allowing new users to quickly master its functionality with minimal training.

By leveraging MA61C ESGE, users streamline the entire spacecraft lifecycle—from design and supply chain management to system integration—accelerating the journey to space.

Key Features

Powered by the GR712RC LEON3-FT SPARC V8 processor
Supports multiple I/O interfaces at the same time
80Mbit of SRAM and 64Mbit of FLASH memory for software and data storage.
Built-in timer driven by an onboard oscillator, ensuring precision in its operations.
API and a Windows-based GUI for easy subsystem monitoring and control

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Key Benefits

Increase efficiency modular design
Reduces design and integration time by 50%
Lowers development costs up to 30%
Simplifies supply chain management

SPIN
Simplify Space Manufacturing

Processor

GR712RC dual-core 32-bit LEON3 fault-tolerant SPARC V8 processor 50 MHz clock frequencies

Physical Properties

- Size: 130 x 130 x 32 mm
- Weight: 315 grams (approx.)

Onboard memory

- SRAM - 64 Mbit - 2 x 32 Mbit
- FLASH - 64 Mbit

Interfaces on the board

- Reset switch
- Mini-USB JTAG-based interface
- 20 GPI/O, connectors: 20 x 0.1' header pin
- 1 x RS232, connector: dsub9 male
- 1 x RS422, connector: dsub9 female
- MIL-STD-1553B RT/BC/MT, connector: dsub9 female
- 2 x SpaceWire interface, connectors: micro-d 9 pins female
- 2 x CAN bus interfaces, connectors: dsub9 male and female
- 1 x I2C master interface connectors: 4 x 0.1' header pin (3.3V)

Power Supply

Operation with +5V supply DC input

LED: Power, reset, clock

Onboard software

- Plug and play
- Embedded driver database
- Routing and converting
- Data Buffering

Port speed

- Spacewire: up to 200 Mbit/ss, nominal 10Mbit/ss.
- Canbus: up to 1 Mbit/s
- I2C interface: up to 400 Kbit/ss
- SPI interface: up to 20 Mbit/s
- RS232: up to 250 Kbit/s
- RS422 interfaces: up to 20 Mbit/s
- JTAG (mini usb): up to 30 Mbit/s (nominal 1Mbit/s)

What does the MA61C package include?

1 x MA61C EGSE
1 x Power adapter + USB cable
1 x USB with EGSE S/W
API (executable and dll format)
GUI

Space Products and Innovation spins technology into the space industry to simplify manufacturing. SPiN enables rapid, flexible, and cost-effective satellite designs through modularity, enabled by the combination of MA61C, its plug-and-play intelligent data node, with system engineering. SPiN democratizes access to space, empowering manufacturers to unlock new ventures.

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